



1309.43768X00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Sachiko HOSHINO et al.
Serial No.: 10/822,725
Filed: April 13, 2004
For: STORAGE SUBSYSTEM AND STORAGE SUBSYSTEM
CONTROL METHOD
Group: 2188
Examiner: M. Padmanabhan

**INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §1.97 & 1.98**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

July 6, 2005

Sir:

In the matter of the above-identified application, Applicants are submitting herewith copies of the documents listed in the attached form equivalent to Form PTO-1449 for the Examiner's consideration.

This information disclosure statement is being submitted before the mailing date of a first office action on the merits.

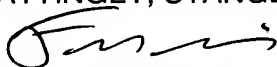
Each of the documents listed on the attached form equivalent to Form PTO-1449 is in the English language.

It is respectfully requested that this information disclosure statement be considered by the Examiner.

Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Mattingly, Stanger, Malur & Brundidge, Deposit Account No. 50-1417 (referencing attorney docket no. 1309.43768X00) please credit any excess fees to such deposit account.

Respectfully submitted,

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.



Frederick D. Bailey
Registration No. 42,282

FDB/sdb
(703) 312-6600

FORM PTO-1449 U.S. Department of
Commerce (Rev. 4/92) Patent and Trademark

ATTY. DOCKET NO.

SERIAL NO.

1309.43768X00**10/822,725**

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use several sheets if necessary)

APPLICANT

Sachiko HOSHINO et al.

FILING DATE

April 13, 2004

GROUP

2188

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	6,148,368	11-2000	DEKONING			
	6,341,331	01-2002	MCNUTT			
	6,347,358	2-2002	KUWATA			
	2003/0196055 A1	10-2003	KAMANO et al.			
	2004/0111557 A1	6-2004	NAKATANI et al.			
	2004/0139168 A1	7-2004	TANAKA et al.			
	2004/0193803 A1	9-2004	MOGI et al.			
	5,568,629	10-1996	GENTRY et al.			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	ABSTRACT	
						YES	NO
	JP 2002-149599	5-2002	Japan			X	
	JP 2002-230189	8-2002	Japan			X	
	JP 2003-157177	5-2003	Japan			X	
	JP 2004-238539	8-2004	Japan			X	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Buck, A. L. et al., "The Storage Server as Virtual Volume Manager", IEEE Comput. Soc., April 1993, USA 26-29, pp. 79-86.
	Gelb, J.P. "System-Managed Storage", IBM Systems Journal, Vol. 28, No. 1, Jan. 1989, pp. 77-103.
	Kaczmariski, M. et al., "Beyond Backup Toward Storage Management", IBM Systems Journal, Vol. 42, No. 2, 2003, pp. 322-337.

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation is considered, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(Form PTO-1449 [6-4])



FORM PTO-1449 U.S. Department of Commerce (Rev. 4/92) Patent and Trademark Office INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO.	SERIAL NO.
	1309.43768X00	10/822,725
	APPLICANT Sachiko HOSHINO et al.	
	FILING DATE April 13, 2004	GROUP 2188

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5,657,470	8-1997	FISHERMAN et al.			
	5,829,053	10-1998	SMITH et al.			
	6,275,824	8-2001	O'FLAHERTY et al.			
	6,275,825	8-2001	KOBAYASHI et al.			
	6,275,898	8-2001	DEKONING			
	6,289,398	9-2001	STALLMO et al.			
	6,425,049	7-2002	YAMAMOTO et al.			
	6,502,162	12-2002	BLUMENAU et al.			
	6,502,193	12-2002	BARBER			
	6,507,905	1-2003	HUBACHER et al.			
	6,519,679	2-2003	DEVIREDDY et al.			
	6,615,324	9-2003	FERNALD			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	ABSTRACT	
						YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Freedom Storage Lightning 9900 V Series, User and Ref. Guide to Hitachi Data Systems, 2002.

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation is considered, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. Department of Commerce (Rev. 4/92) Patent and Trademark Office INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO.	SERIAL NO.
	1309.43768X00	10/822,725
	APPLICANT Sachiko HOSHINO et al.	
	FILING DATE April 13, 2004	GROUP 2188

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	6,665,786	12-2003	MCMICHAEL et al.			
	6,715,031	3-2004	CAMBLE et al.			
	6,772,287	8-2004	UCHIYAMA et al.			
	6,851,022	2-2005	IKEUCHI et al.			
	2002/0095602 A1	7-2002	PERSON et al.			
	2002/0099837 A1	7-2002	OE et al.			
	2002/0103913 A1	8-2002	TAWIL et al.			
	2002/0104008 A1	8-2002	COCHRAN et al.			
	2003/0023868 A1	1-2003	PARENT			
	2003/0055933 A1	3-2003	ISHIZAKI et al.			
	2003/0055972 A1	3-2003	FULLER et al.			
	2003/0084241 A1	5-2003	LUBBERS et al.			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	ABSTRACT	
						YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation is considered, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. Department of Commerce (Rev. 4/92) Patent and Trademark Office INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO.	SERIAL NO.
	1309.43768X00	10/822,725
	APPLICANT Sachiko HOSHINO et al.	
FILING DATE	GROUP	
April 13, 2004	2188	

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	2003/0115434 A1	6-2003	MAHALINGAM et al.			
	2003/0115447 A1	6-2003	PHAM et al.			
	2003/0182501 A1	9-2003	GEORGE et al.			
	2004/0010563 A1	1-2004	FORTE et al.			
	2004/0049564 A1	3-2004	NG et al.			
	2004/0064729 A1	4-2004	YELLEPEDDY			
	2004/0111596 A1	6-2004	RAWSON III			
	2005/0010722 A1	1-2005	CHEN			
	2005/0015546 A1	1-2005	ZOHAR et al.			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	ABSTRACT	
						YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation is considered, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.